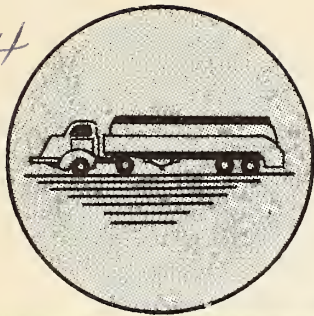


Historic, archived document

Do not assume content reflects current
scientific knowledge, policies, or practices.

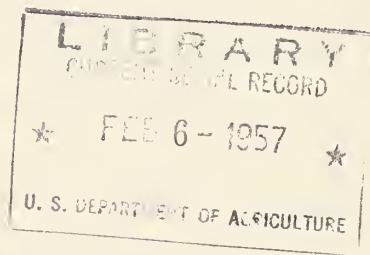
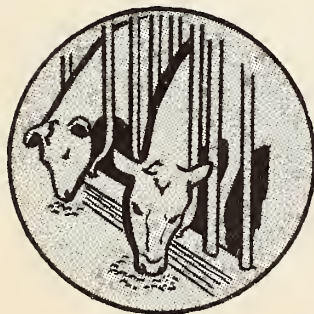
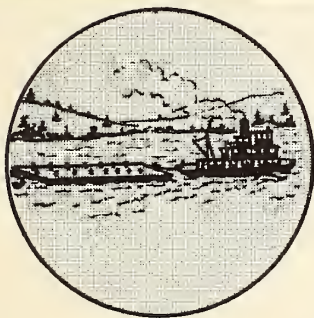
A 280-31
M 34A m
of 4



Industrial Molasses

An Annual Market Review

1956



UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Washington, D.C.

PREFACE

This is the third annual summary of developments in the molasses market to be presented by the Agricultural Marketing Service. The first annual summary was issued in November 1954. Included in this market review is a discussion of industrial molasses supply, utilization, prices, and other factors which have a bearing on the molasses market. Commodities which affect the molasses market are also discussed, as well as developments in domestic and foreign molasses production and movement. The statistical series which have appeared in previous molasses reports have been brought up to date with estimates for calendar year 1956.

CONTENTS

	<u>Page</u>
Preface	2
Highlights	3
Prices	3
Supplies	4
Utilization	6
Industrial Alcohol	10
Foreign Developments	12
Market Trends	14

List of tables in text:

Table 1. - United States industrial molasses supplies, by source, calendar years 1954 and 1955, and estimated supplies for 1956	8
---	---

Table 2. - Utilization of molasses by use, 1954-56	9
--	---

List of figures in text:

Figure 1. - Molasses price history, 1940-56	5
---	---

Figure 2. - Industrial molasses supply by major sources, 1945-56	7
--	---

Figure 3. - Molasses feed usage and corn-molasses price differential, 1940-56	11
---	----

Tables in appendix	16
--------------------------	----

Appendix - Statistical data on molasses and related products	17-28
--	-------

INDUSTRIAL MOLASSES - AN ANNUAL MARKET REVIEW

Prepared by the Grain Division

HIGHLIGHTS

Sharply higher prices for industrial molasses and a decrease in its use for livestock feed were the outstanding market developments during the past year. These trends were in rather sharp contrast with those of 1954 and 1955, when prices fluctuated only about 1 cent per gallon, and new marketing methods contributed to a steady increase in feed molasses usage. Consumer resistance to high molasses prices in the fall of 1956 reflected the disappearance of the cost advantage of molasses over other carbohydrate feeds at most feed mixing centers in the United States. Although total molasses usage during 1956 will continue at a relatively high rate, its use in mixed feeds and on-farm use may be expected to be noticeably lower than during the past 2 years, as feed mixers cut back to minimum levels in formula feeds and farmers turn to other sources of carbohydrate feeds.

PRICES

New Orleans

Feed molasses prices at New Orleans fluctuated about 1.25 cents per gallon during 1954 and 1955, following normal seasonal trends. During November 1955 the New Orleans wholesale price averaged 10.2 cents per gallon. During December the increased seasonal demand resulted in a gradual climb to 10.5 cents. By the end of January 1956 the blackstrap price had reached 13 cents, the highest for that date since 1952 and 3 cents above January 1955. This reflected the higher cost of Cuban blackstrap which was sold the last week in January 1956 at 10.25 cents per gallon, f.o.b. Cuba. Blackstrap reached a peak of 13.5 cents at New Orleans the first week of March, but dropped back 0.5-cent during April. During this period molasses consumption usually declines as new pasture comes in. With the drop in demand, prices usually decline. This was not the case during May, however, as the price for molasses started its second advance since the beginning of the year and reached 15.5 cents per gallon by July. The price was steady at that level for only one month as it continued the upward spiral the first week in August.

During the August-October period when a nominal increase in demand is expected, prior to the heavy winter feeding months, blackstrap prices jumped from 15.5 to 24 cents per gallon. This 8.5-cent increase is without precedent during peacetime and brought the price of blackstrap to the highest point since April 1952. (The Korean conflict and its attendant inflation caused molasses prices to increase from 6 cents

in February 1950 to a peak of 35 cents twelve months later.) During the August-October period the demand for molasses was moderate at most terminals and distributors reported a decline in the volume of molasses sold.

New York

East Coast prices for feed molasses followed the pace set by New Orleans, although with fewer fluctuations. The price at New York in November 1955 was 11 cents per gallon. A steady increase brought the price to 16 cents by the first week in February. From that point the price increased only 0.5-cent through the end of July. The August upsurge of prices in New Orleans was repeated in the New York market where 25 cents per gallon was reached by the first week in November. A price differential between New York and New Orleans of about 3 cents per gallon was maintained from November 1955 to May 1956. From May to October the differential narrowed considerably. For a brief period in early October the differential was reversed when the New Orleans price was almost 1 cent higher than the price at New York. An increase of almost 7 cents per gallon at New York during October again re-established the historical relationship. The price differential between New York and New Orleans from January through October 1956 averaged 1.7 cents. This compares with 1.96 cents during the same period in 1955 and 1.48 cents in 1954.

SUPPLIES

Industrial molasses supplies for 1956 are estimated at 607 million gallons, about 1 percent below the 617 million gallons available during calendar year 1955, but 163 million above the 10-year (1945-54) average. Heavy shipments of Cuban high-test molasses have kept the supply above the 600-million mark. Most of this Cuban product is used in the manufacture of ethyl alcohol but some has found its way into feed molasses outlets. Blackstrap molasses is used chiefly for feed with very little going into alcohol production. Supplies of cane blackstrap have been adequate at most distribution terminals during calendar year 1956. Exceptions to this have been in the Texas drought area and some portions of the Southeast, as seasonal feed consumption increased.

Beet molasses, which accounts for about 8 percent of total supplies, has been limited during the last half of 1956. The bulk of beet molasses supplies is used by yeast manufacturers. However, increasing quantities of beet molasses are being mixed with beet pulp, leaving only limited quantities available for feed usage in liquid form. Citrus molasses supplies, which were abundant only a few years ago, have been scarce during all of 1956, following the pattern of 1955 when cattle-feeder demand surpassed the available supply of citrus molasses. During 1956 most of the citrus molasses supply was committed to established customers. Corn molasses production did not vary greatly from past years, and most of 1956 saw generally limited supplies at the few

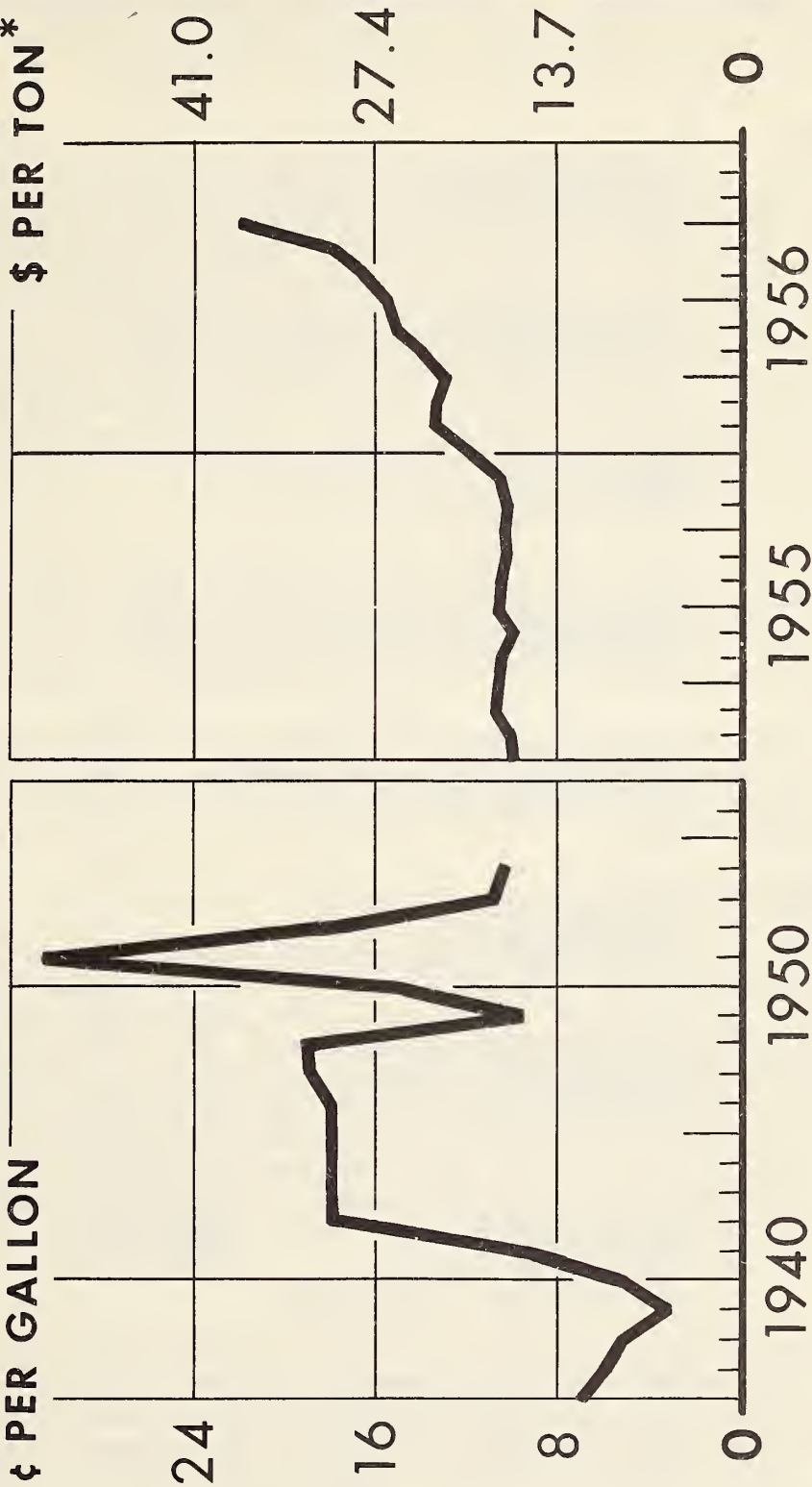
MOLASSES PRICE HISTORY

BY YEARS

¢ PER GALLON

BY MONTHS

\$ PER TON*



F.O.B. TANKCAR, NEW ORLEANS

* CONVERTED ON BASIS OF 171 GALLONS PER TON

U. S. DEPARTMENT OF AGRICULTURE

NEG. 1182- 56 (12) AGRICULTURAL MARKETING SERVICE

FIGURE 1

corn-molasses production points. Corn molasses accounts for about 3 percent of our total supply. Foreign supplies of industrial molasses accounted for 59 percent of United States supplies.

Imports

Imports of industrial molasses are estimated at 365 million gallons for 1956. About 64 percent of this will be from Cuba, our chief supplier. Of the expected 235 million gallons of Cuban molasses, approximately 112 million gallons will be high-test molasses, including about 25 million gallons from the 1955 crop. Imports from Mexico will be about 35 million gallons, considerably less than a year ago as a result of decreased production in that country. The Dominican Republic is expected to export around 30 million gallons of blackstrap to the United States, about 5 million under the 1955 total. All other countries may be expected to ship to the United States about 64 million gallons, about the same as in 1955.

Imports from the Orient will not be as great as in 1955 chiefly due to decreased imports from Formosa and the Philippines. Indonesia exported several million gallons of cane blackstrap to the United States for the first time since World War II but imports from that country will not offset the reduction in U. S. imports from other Oriental countries.

The estimated total of 365 million gallons of foreign molasses supplies could be materially increased if Cuba chooses to ship to the United States molasses which was originally earmarked for local use or manufacturing purposes.

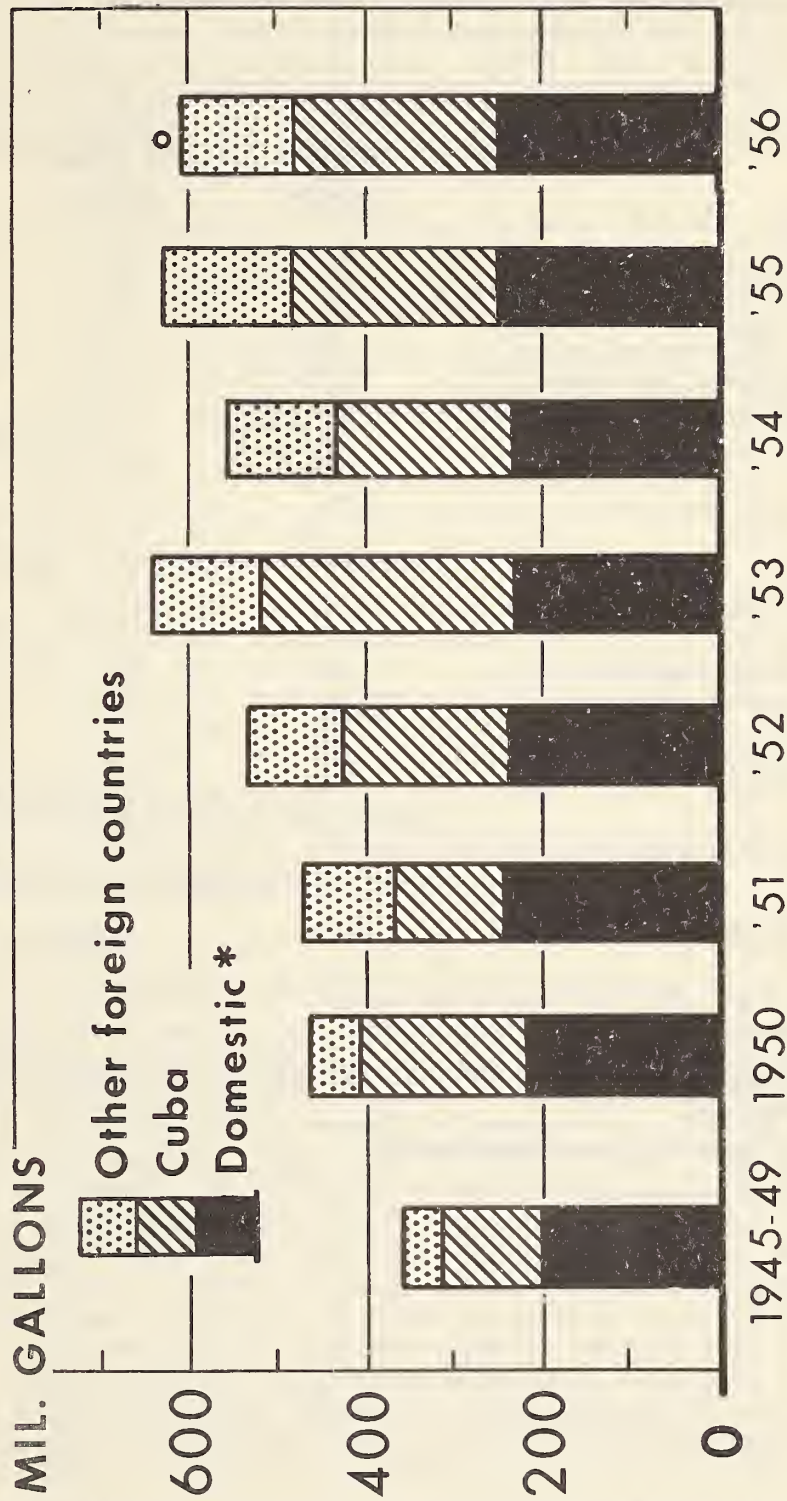
Domestic Production

Production of industrial molasses on the United States mainland, Puerto Rico, and Hawaii will probably be about 2 million gallons under the 1955 domestic production of 252 million. This results from an expected decrease in mainland sugarcane production of about 12 percent. Assuming molasses yields to be about average, a molasses crop of 43 million gallons may be expected. The anticipated increase in beet molasses may tend to offset this reduction. Inshipments from Puerto Rico and Hawaii will total about 95 million gallons, about the same as in 1955. Production of molasses from all other domestic sources will reach an estimated 155 million gallons. Industrial molasses supplies from all sources are shown in table 1.

UTILIZATION

Livestock feeding continues to lead as the chief usage of industrial molasses, and will account for about 66 percent of all the molasses used during 1956. The upward trend of molasses usage in mixed feeds and on-farm feeding ended with 1955 as the peak year. A record 68 percent or 419 million gallons was consumed during 1955 as compared with 396 million estimated for 1956. The ethyl alcohol industry remains the

INDUSTRIAL MOLASSES SUPPLY BY MAJOR SOURCES



U. S. DEPARTMENT OF AGRICULTURE

NEG. 1180-56 (12) AGRICULTURAL MARKETING SERVICE

FIGURE 2

Table 1. - United States industrial molasses supplies, by source, calendar years 1954 and 1955, and estimated supplies for 1956

Source	1956 <u>1/</u>	1955	1954
	Million gallons	Million gallons	Million gallons
<u>Domestic:</u>			
Hawaii <u>2/</u>	50	50	47
Puerto Rico <u>2/</u>	45	44	37
Beet	52	50	45
Mainland cane mills	43	49	46
Refiners' blackstrap	34	33	32
Hydrol	17	18	18
Citrus	<u>9</u>	<u>8</u>	<u>9</u>
Total domestic	250	252	234
<u>Foreign:</u>			
Cuba <u>3/</u>	235	233	203
Mexico	35	43	38
Dominican Republic	30	35	24
Other countries	<u>65</u>	<u>63</u>	<u>76</u>
Total foreign	365	374	341
<u>Exports</u>	- 8	- 9	- 11
GRAND TOTAL	607	617	564

1/ Estimated.

2/ Includes only those quantities shipped to United States Mainland.

3/ Includes high-test molasses.

second largest user of molasses, and will use about 90 million gallons of molasses (mostly high-test) during 1956. This is an increase of 8 million gallons over last year, but 33 percent under the 1945-54 average of 134 million gallons. Butyl alcohol and acetone production will utilize about 5 percent less molasses than in 1955. The 36 million gallons of molasses used for this purpose last year was near the record of 40 million used in 1946. As outlined in table 2, other categories of molasses utilization reflect a slight increase.

Table 2. - Utilization of molasses by use, 1954-56

Use	1956	1955	1954
	Million gallons	Million gallons	Million gallons
Molasses <u>1/</u> used for:			
Ethyl alcohol.....	90	82	57
Butyl alcohol and acetone	34	36	29
Spirits and rum	3	3	2
Feed	396	419	406
Yeast, vinegar and citric acid	70	65	60
Edible and miscellaneous	<u>14</u>	<u>12</u>	<u>10</u>
Total utilization	607	617	564

1/ Includes high-test molasses.

Molasses and Corn Prices

When comparing the carbohydrate values of molasses and corn (6 1/2 gal.= 1 bushel) the historical price relationship has favored molasses. This has been generally true during the last 12 years with the exception of 1951. During 1956 the price of No. 3 yellow corn at Kansas City has increased from a low of \$1.29 per bushel in January to a high of \$1.63 in July, but has been decreasing steadily through October to \$1.36. Molasses prices at Kansas City during the same 9-month period increased from 18.4 cents per gallon to 30.7 cents. In terms of the above ratio, the price of molasses during the last week of October 1956 was \$2.00 or 64 cents higher than a bushel of corn. In Minneapolis, molasses was 82 cents higher and in Chicago 68 cents above the comparable price of corn. While molasses prices increased sharply during the first nine months of 1956, other feedstuff prices increased only slightly. This has resulted in a decrease in the amount of molasses used in mixed feeds and the amount used by farmers and ranchers. Consumers accustomed to using molasses because of its price advantage over other carbohydrates

have turned to grains and other feedstuffs. Table 8 shows molasses-corn price comparisons at New York, Kansas City, and Chicago. During October, molasses price increases averaged 5.3 cents per gallon at those three points or 34.5 cents per 6 1/2 gallons. Corn prices (No. 3 Yellow) at the same points dropped an average of 35.5 cents per bushel during October.

INDUSTRIAL ALCOHOL

The use of molasses in the production of alcohol increased during 1956, extending the importance of the alcohol industry in its relationship to the molasses market. As the usage of molasses has increased since 1954, so has the price of ethyl alcohol. The last decline in alcohol prices started October 1953 at 48 cents per wine 1/ gallon, and reached the low point of 40 cents in April 1954. The price was static at that level until January 1956, when a slight increase of 2 cents per gallon took place. The price for ethyl alcohol stayed at 42 cents through the first half of 1956 and rose another 5 cents in July to 47 cents per gallon where it remained through October.

Production

Ethyl alcohol production will amount to about 260 million wine gallons during 1956, an increase of 8 percent over 1955, and the largest since 1943. Petroleum byproducts (ethylene gas and ethyl sulphate) will account for approximately 71 percent of all raw materials used for production - a slight percentage decrease from last year. Molasses usage will be nearly 22 percent, up 4 percent over last year. Grains will represent less than 2 percent of the raw materials used for alcohol, and all other raw materials used account for about 5 percent of the total. An estimated 90 million gallons of molasses will make up the second largest source of raw material for alcohol, an increase of about 8 million gallons over 1955, but considerably under the 1950-54 average of 138 million gallons. See table 10.

Imports

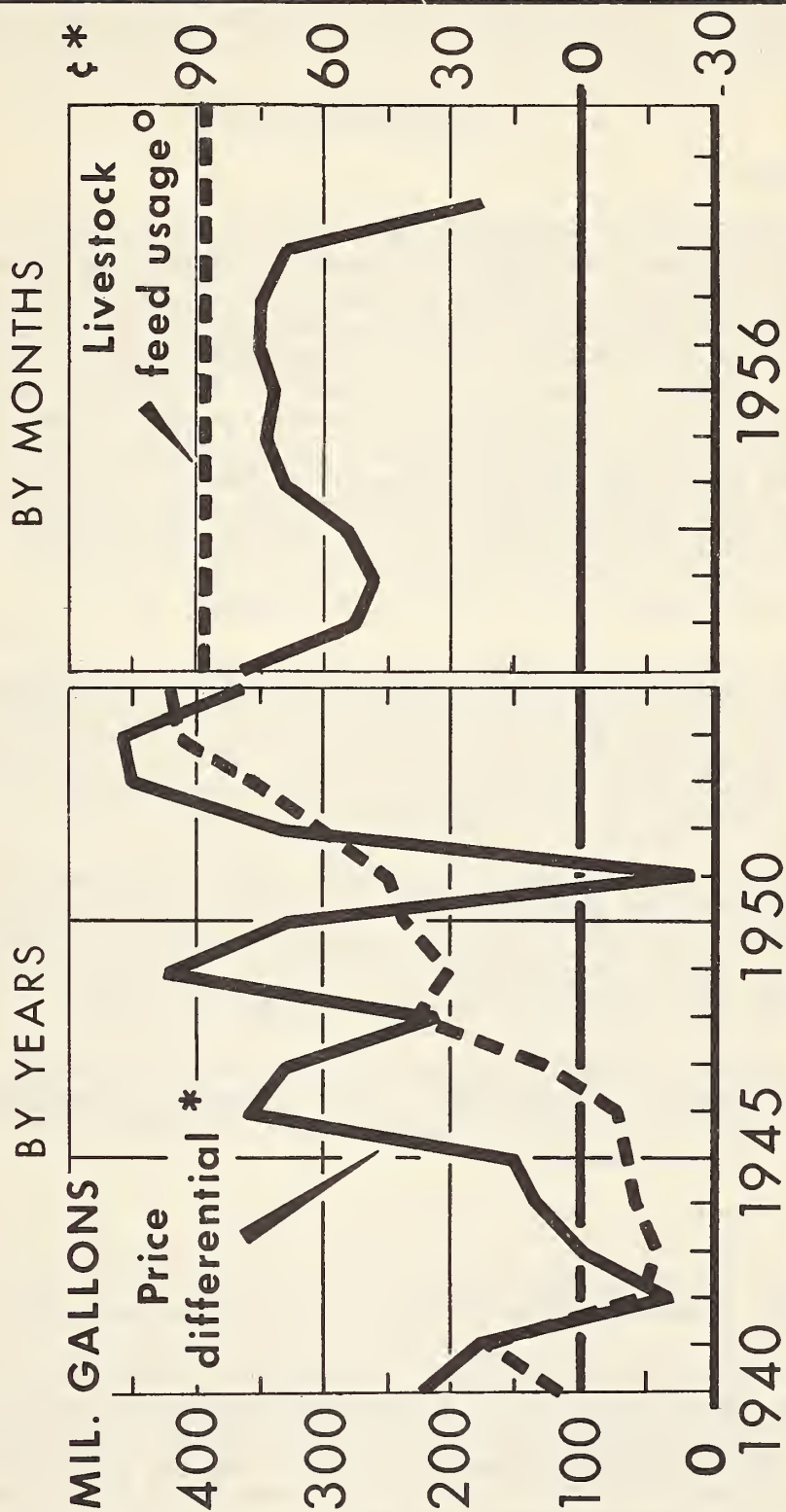
Ethyl alcohol imports increased in 1956 and may total 10 to 12 million gallons, which will be greater than any year since 1952. During 1955 only 2.7 million gallons were imported, and 1954 imports were less than one million. During 1956 U.S. demand continued at a high level, and domestic prices for alcohol strengthened. These factors have induced the increased rate of alcohol imports.

Stocks

Stocks of ethyl alcohol during 1956 were generally lower than a year ago. On January 1, 1956, alcohol stocks totaled 22.1 million gallons compared to 27.4 million a year earlier. Ethyl alcohol stocks in

1/ Standard U.S. gallon of liquid measure containing 231 cubic inches

MOLASSES FEED USAGE AND CORN-MOLASSES PRICE DIFFERENTIAL



* PRICE DIFFERENTIAL AT NEW YORK BETWEEN 1 BUSHEL OF CORN AND 6.5 GALLONS OF BLACKSTRAP MOLASSES AT NEW YORK
 ° 1956 ESTIMATED

U. S. DEPARTMENT OF AGRICULTURE

NEG. 1181-56 (12) AGRICULTURAL MARKETING SERVICE

FIGURE 3.

million gallons, at the end of each of the first three quarters of 1956, with 1955 comparisons, are as follows: 18.8 (25.3), 20.1 (26.3), and 21.5 (21.3).

FOREIGN DEVELOPMENTS

Caribbean

Production of Cuban high-test molasses ^{2/} totaled 111.4 million gallons during 1956, less than half the record 231.5 million gallons produced from the 1955 crop. Most of the latter crop had been sold late in 1955 at 1.25 cents per pound of sugar content (about 11.25 cents per gallon). Total sales contracts of 1956 Cuban high-test amounted to 211 million gallons subject to the ability to deliver, 136 million of which was sold at 1.40 cents per pound of sugar content (about 12.6 cents per gallon). This left 105 million gallons which the Cubans were unable to deliver from the 1956 production of high-test molasses. Of the 211 million gallons sold, 50 million was intended for the United Kingdom. Actual deliveries of high-test from the 1956 crop, as of September 30, 1956, amounted to 84.5 million gallons to the United States, 13.5 million to the United Kingdom and 1.1 million to Canada.

Production of cane blackstrap in Cuba totaled 213 million gallons, an increase of about 15 million gallons over the 1955 blackstrap crop. About 101 million gallons of blackstrap were available for export, the remainder going to domestic consumption. All 1956 blackstrap sales for export were made at a price of 10.25 cents per gallon, an increase of 2.45 cents over the price for 1955 blackstrap.

An agreement has reportedly been made between the Dominican Republic and United States buyers for the entire 1957 crop of blackstrap which may amount to about 30 million gallons. According to embassy reports, the price set is 18 cents per gallon, with some qualifications pending the price Cuba ultimately receives for its 1957 crop.

Severe drought conditions in Mexico reduced sugar production there by about 20 percent. This caused a drop in exports to the United States of about 10 million gallons during 1956. Prospects for the 1956-57 Mexican crop are average.

Europe

European beet-molasses production was adversely affected by bad weather, which may restrict the possibility of any increased exports to the United States in 1956. The Netherlands will probably be forced to import molasses to meet its feed requirements. Other European countries will be consuming the bulk of their own molasses production. France was the only major exporter of beet molasses to the United States during 1956. West Germany, at one time a major foreign supplier of beet molasses, probably will not ship any beet molasses to the United

^{2/} A molasses-type product containing about 75 percent sugar which is processed from sugarcane juice, without the removal of any sugar.

States during the year 1956. Total shipments of European beet molasses to the United States may reach 13 million gallons, about the same as a year ago. The sudden increase in domestic molasses prices in the United States during the fall of 1956 may, however, attract additional amounts of the European beet molasses.

Asia

Indonesia is continuing to expand her sugar industry. The first post-war shipments of molasses from that country arrived in the United States this year. Most oriental molasses production is remaining in that area, consumed mostly in Japan. The Philippines may be expected to export about 9 or 10 million gallons to the United States but most of its crop will also go to Japan.

In late October the Indian Government expressed interest in locating molasses buyers in the United States. Although we have never imported molasses from India, it appears that it has an exportable surplus of cane blackstrap which may find its way into United States markets by 1957.

New Sugar Mills

Under economic expansion programs, facilities for the milling of cane sugar are increasing rapidly in many parts of the world. The most significant of these increases is in India where 35 new mills are planned during the next few years. Several of these mills are expected to be grinding for the 1957-58 season. A factory for the manufacture of sugar-mill machinery is being erected in Madras, India which will be able to manufacture two complete sugar mills per year. In terms of blackstrap molasses this is very significant. India now produces almost as much sugar as Cuba. Only half of this is centrifugal sugar however, so the quantity of blackstrap available would not be comparable with Cuba's production. Cane blackstrap molasses is a byproduct of the centrifugal milling process. As the additional mills in India increase its centrifugal sugar potential, its capacity for producing blackstrap molasses is also increased. Although molasses yields are variable we will assume about 40 gallons of blackstrap per short ton of raw sugar.

Estimated production of centrifugal sugar for India for the 1956-57-crop is about 2.5 million tons, which would indicate a probable blackstrap production of 100 million gallons. This production will be materially increased in later years with the addition of 35 new mills.

Over two dozen new mills are planned in Central and South America and several are being erected in Africa. Most of the sugar milling potential in Asia and much of the increased blackstrap production would probably go to the United Kingdom, Japan, or be used locally. Under market conditions similar to those in October 1956, it is feasible that some of the blackstrap would find its way into the United States industrial molasses market.

MARKET TRENDS

The world sugar market strengthened considerably in late 1956, bringing with it an upward adjustment in the United States sugar quotas to a level of 9 million tons. Higher world sugar prices may also lead to stepped-up sugar production in Cuba and other countries. This will probably eliminate any production of high-test molasses in Cuba during 1957 as that country will be using most of its available cane for an estimated 5.85 million short tons of raw sugar. Blackstrap production would be increased by about 26 million gallons as sugar production is increased 3/.

United States alcohol interests, who used most of the high-test molasses during 1956, probably would not be in the market for 1957-crop blackstrap if the cost for 1957-crop Cuban molasses reflects the high 1956 domestic prices in the United States. Assuming a cost in 1957 of 18 to 20 cents per gallon and an ocean freight cost of 5 or 6 cents, the raw material costs for alcohol would be at least 23 cents per gallon. It requires approximately 2.3 gallons of blackstrap to produce one gallon of ethyl alcohol. These estimated 1957 prices would put raw material costs alone above the October wholesale ethyl alcohol price of 47 cents per gallon.

Reduced usage of molasses by the feed trade, which has been reported by molasses distributors and feed mixers in the fall of 1956, may continue on into 1957. Domestic supplies of cane blackstrap will be higher in 1957 as the Mainland cane area, Hawaii and Puerto Rico increase their sugar production to supply the larger quotas granted under the Sugar Act Amendment of 1956.

The tense international situation in October had a strengthening effect on molasses prices which had already more than doubled during 1956. Ocean rates for molasses tankers were pushed up by the disturbed oil situation in the Near East, and had reached about 4 cents per gallon 4/ by the end of October, about twice the rate in early 1956. These factors point toward a continuation of high molasses prices, in spite of distributors' and feeders' reports of decreased demand and consumption by the feed trade. Many molasses deliveries were in the latter part of 1956 under contracts running through December 31, contracts which were made at much lower prices than those prevailing in late October. The significance of higher spot prices may not be fully known until January 1957, when many consumers will be negotiating for new deliveries. By that time, the Cuban Sugar Stabilization Institute may have sold the 1957 Cuban blackstrap crop. In past years the Cuban price has generally indicated the trend of United States domestic prices.

3/ About 40 gallons of blackstrap was produced per short ton (raw sugar) of 1956 Cuban sugar.

4/ Ocean freight rate based on one port loading, North side of Cuba to one Gulf port.

The development of an efficient and extensive molasses marketing system during the last few years has brought feed molasses within reach of practically every farmer and rancher in the country. Many of these consumers have invested in molasses mixing equipment and storage facilities. They have regarded molasses as a commodity with relatively stable prices, which enabled them to plan ahead in their livestock feeding programs. Since higher feed molasses prices may be expected in 1957, it would be to the advantage of all segments of the molasses trade to reappraise the situation and assist consumers by providing them with molasses at a cost more nearly in line with the costs of other animal feeds.

TABLES IN APPENDIX

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
3	Estimated utilization of industrial molasses, by use, United States 1946-56	17
4 (Parts 1 & 2)	Production, imports and exports of industrial molasses, United States 1942-56	18 & 19
5 (Parts 1 & 2)	Production, exports, and inshipments to the mainland, of industrial molasses, by principal areas supplying the United States, 1942-56	20 & 21
6	Molasses, blackstrap: Price per gallon, f.o.b. tank-car, New Orleans, by months, September 1937-October 1956	22
7	Molasses, blackstrap: Price per gallon, f.o.b. tank-car New York, by months, January 1936- October 1956	23
8	Price comparisons between molasses and No. 3 yellow corn at New York, Chicago, and Kansas City	24
9	Production of ethyl alcohol, in industrial alcohol plants from specified raw materials, 1942-56	25
10	Industrial molasses used in the production of alcohol and distilled spirits, 1941-56	26
11	Ethyl alcohol, 190 proof: Average wholesale price per gallon, tax free, tank-car lots, New York, January 1942-October 1956	27
12	Molasses used in the production of ethyl alcohol by months, January 1953-September 1956	28

Table 3. - Estimated utilization of industrial molasses, by use, United States
1946-1956

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Industrial Molasses Utilization In:											
Industrial Alcohol Plants:											
Ethyl alcohol	73.2	139.2	135.6	151.1	142.9	151.7	158.8	180.2	56.6	82.5	90.0
Other products, chiefly butyl and acetone	40.4	19.2	11.1	20.0	17.7	6.6	8.0	25.6	28.9	36.1	34.0
Total	113.6	158.4	146.7	171.1	160.6	158.3	166.8	205.8	85.5	118.6	124.0
Distilleries											
Spirits and rum	3.5	2.8	3.1	4.3	2.4	2.6	2.4	2.6	2.3	2.7	3.0
Total in alcohol plants and distilleries 1/	117.1	161.2	149.8	175.4	163.0	160.9	169.2	208.4	87.8	121.3	127.0
Livestock Feed											
Mixed feeds, direct feeding and silage 2/	78.4	127.9	224.6	200.6	233.2	248.7	300.4	353.9	406.1	449.0	396.0
Other Uses											
Yeast, citric acid and vinegar	46.6	51.0	51.0	51.0	51.0	52.0	53.0	55.0	60.0	65.0	70.0
Edible molasses and sirups	21.8	11.4	8.3	7.5	7.0	7.0	7.0	8.0	10.0	12.0	14.0
Total other uses 3/	68.4	62.4	59.3	58.5	58.0	59.0	60.0	63.0	70.0	77.0	84.0
Total Utilization	263.9	351.5	433.7	434.5	454.2	468.6	529.6	625.3	563.9	617.3	607.0

1/ Alcohol Tax Unit, Internal Revenue Service.

2/ Estimated by subtracting molasses used in alcohol plants and distilleries, and an estimate of "other uses" from total mainland molasses supplies, and using the residual as molasses utilized in feeds. No changes in stocks were considered. Information for 1946 from data issued by U.S. Tariff Commission.

3/ Data for 1946 from U.S. Tariff Commission; 1947-56 estimated.

Table 4. (Part 1) - Production, imports and exports of industrial molasses,
United States, 1942-1956

Year	Mainland Production					
	Cane 1/ : 1,000 gallons	Beet 2/ : 1,000 gallons	Refiners' : blackstrap 3/ : 1,000 gallons	Citrus 4/ : 1,000 gallons	Hydrol 5/ : 1,000 gallons	Total : 1,000 gallons
1942.....	27,883	25,640	21,615	-	19,884	95,022
1943.....	32,672	24,044	28,683	-	18,638	104,037
1944.....	35,841	35,937	33,944	2,650	17,668	126,040
1945.....	34,804	40,943	30,041	3,960	17,169	126,917
1946.....	28,450	43,818	25,111	8,058	16,716	122,153
1947.....	27,942	34,539	34,653	10,342	20,261	127,737
1948.....	40,305	42,333	35,612	10,953	18,364	147,567
1949.....	44,362	37,851	32,944	7,259	19,031	141,447
1950.....	44,814	38,918	34,326	7,929	21,388	147,375
1951.....	44,350	45,377	32,775	11,926	18,411	152,839
1952.....	51,901	33,230	36,221	9,333	18,063	148,748
1953.....	48,632	38,229	36,123	7,382	18,792	149,158
1954.....	46,050	44,832	31,836	8,804	17,873	149,395
1955.....	49,187	49,942	32,954	8,422	17,725	158,230
1956 9/ : :	43,000	52,000	34,000	9,000	18,000	156,000

1/ Data for 1942-47 from "World Sugar Situation," Bureau of Agricultural Economics, U. S. Dept. of Agriculture, Sept. 1949; 1948-55 from unpublished data of Sugar Division, CSS.

2/ From reports submitted by beet sugar companies to Sugar Division.

3/ Figures for 1942-47 estimated by multiplying refiners' production of sugar (short tons, raw value) by 6.25; 1948-55 from reports submitted to Sugar Division.

4/ Obtained from records of the Florida Citrus Processors Association.

5/ Estimated by multiplying total domestic dextrose sales and exports by a constant, assuming 2.58 gallons of hydrol per 100 pounds of dextrose.

Table 4. (Part 2) - Production, imports and exports of industrial molasses, United States, 1942-1956

Year	Imports and Inshipments from -										Exports	Total	market supply
	Cuba	Dominican Republic	Mexico	Hawaii	Puerto Rico	Other	Total	gallons	gallons	gallons			
	6/	6/	6/	7/	6/	8/		1,000	1,000	1,000	1,000	1,000	1,000
	gallons	gallons	gallons	gallons	gallons	gallons		gallons	gallons	gallons	gallons	gallons	gallons
1942.....	194,031	8,173	8,477	36,838	12,098	3,849	263,466	435	358,053				
1943.....	145,220	-	3,102	49,805	10,025	3,067	211,219	234	315,022				
1944.....	249,584	40,832	70	38,531	17,632	7,986	354,635	150	480,525				
1945.....	113,614	17,546	-	36,942	16,268	6,362	190,732	1,621	316,028				
1946.....	57,968	18,458	10,021	32,226	17,287	6,743	142,703	959	263,897				
1947.....	105,387	21,328	21,160	37,461	31,956	7,130	224,422	618	351,541				
1948.....	139,258	20,364	33,114	44,271	44,811	12,523	294,341	8,176	433,732				
1949.....	161,872	17,743	23,595	42,523	43,589	11,566	300,888	7,836	434,499				
1950.....	186,784	16,828	21,184	41,076	31,224	19,045	316,141	9,344	454,172				
1951.....	130,472	16,693	25,195	41,572	49,029	56,029	319,912	4,177	468,574				
1952.....	186,676	27,946	21,547	37,942	52,252	59,952	386,315	5,424	529,639				
1953.....	291,352	26,199	31,829	47,558	32,651	61,385	490,974	14,821	625,311				
1954.....	202,940	23,516	38,382	46,530	37,558	76,121	425,047	10,502	563,940				
1955.....	233,166	34,573	43,277	50,413	44,232	62,471	468,132	9,077	617,285				
1956 9/..	235,000	30,000	35,000	50,000	45,000	65,000	460,000	13,000	603,000				

6/ Summarized from Bureau of Customs data and reports from Department of Commerce.

7/ From data published by Department of Commerce for 1942-47. Data for 1948-55 furnished by Hawaiian Sugar Planters' Association.

8/ Includes shipments from British Guiana, British West Indies, Canada, Denmark, Ecuador, Egypt, France, French West Indies, Germany, Haiti, Indonesia, Italy, Mauritius, Netherlands, Nicaragua, Panama, Peru, Poland, Philippines, Spain, Taiwan (Formosa), Trinidad, and Turkey.

9/ All data for 1956 estimated.

Table 5. (Part 1) - Production, exports, and inshipments to the mainland, of industrial molasses, by principal areas supplying the United States, 1942-1956

	Cuba				Puerto Rico			
Year	Production 1/	Exports to United States 2/	Production minus exports to United States	1,000 gallons	Production 3/	Inshipments to United States 2/	Production minus inshipments to United States	1,000 gallons
	1,000 gallons	1,000 gallons	1,000 gallons		1,000 gallons	1,000 gallons	1,000 gallons	
1942.....	332,230	202,940	129,290		51,400	12,098	39,302	
1943.....	139,504	145,220	- 5,716		40,200	10,025	30,175	
1944.....	453,914	249,583	204,331		28,200	17,632	10,568	
1945.....	194,711	113,614	81,127		40,400	16,268	24,132	
1946.....	233,650	57,968	175,682		38,400	17,287	21,113	
1947.....	299,400	105,387	194,013		50,800	31,956	18,844	
1948.....	332,000	139,258	192,742		54,800	44,810	9,990	
1949.....	291,599	161,872	129,727		59,275	43,589	15,686	
1950.....	262,365	186,784	75,581		49,522	31,224	18,298	
1951.....	288,625	130,472	158,153		60,300	49,951	10,349	
1952.....	397,900	186,676	211,224		69,800	52,253	17,547	
1953.....	278,300	291,352	-13,052		59,856	32,651	27,205	
1954.....	367,754	202,940	164,817		61,600	37,558	24,042	
1955.....	429,235	233,166	196,069		56,246	44,232	12,014	
1956 7/..	324,460	235,000	89,460		56,899	45,000	11,899	

1/ Data from "World Sugar Situation" dated Sept. 1949, Bureau of Agricultural Economics, and from reports by the Cuban Sugar Stabilization Institute. Includes 131.7 million gallons of high-test molasses in 1954, 231.5 million in 1955, and 111.4 million in 1956.

2/ Summarized from reports of the Department of Commerce.

3/ Data from "Annual Report of the President", Association of Sugar Producers of Puerto Rico.

Table 5. (Part 2) - Production, exports, and inshipments to the mainland, of industrial molasses, by principal areas supplying the United States, 1942-1956

Year	Hawaii		Production		Imports and inshipments to United States		Production minus imports and inshipments to United States		Total	
	5/ 1,000 gallons	6/ 1,000 gallons	Production to United States	Production minus inshipments to United States	Imports and inshipments to United States	Production minus imports and inshipments to United States	Production to United States	Production minus imports and inshipments to United States	1,000 gallons	1,000 gallons
1942.....	47,004	36,839		10,165		430,634		178,757		
1943.....	50,390	49,805		585		230,094		25,044		
1944.....	46,659	38,531		8,128		528,773		223,027		
1945.....	44,769	36,942		7,827		279,910		113,086		
1946.....	36,121	32,226		3,895		308,171		200,690		
1947.....	48,768	37,461		11,307		398,968		224,164		
1948.....	43,515	44,483		- 968		430,315		201,764		
1949.....	43,006	42,523		483		393,880		145,896		
1950.....	41,381	41,076		305		353,268		94,184		
1951.....	44,723	41,572		3,151		393,648		171,653		
1952.....	44,041	37,942		6,099		511,741		234,870		
1953.....	51,319	47,558		3,761		389,475		17,614		
1954.....	51,759	46,530		5,229		481,113		194,085		
1955.....	52,844	50,413		2,431		538,325		210,514		
1956 7/..	52,000	50,000		2,000		434,203		104,203		

5/ Data for 1942-48 supplied by the California and Hawaiian Sugar Corp., Ltd.; 1949-55 by the Hawaiian Sugar Planters Association.

6/ Data supplied by the Hawaiian Sugar Planters Association.

7/ All data for 1956 estimated.

Table 6. - Molasses, blackstrap: Price per gallon, f.o.b. tank-car, New Orleans, by months, January 1937-October 1956 ^{1/}

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1937....	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.88	6.50	6.12	6.12	6.80
1938....	6.50	6.50	6.50	6.50	6.25	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.19
1939....	6.00	6.00	3.50	3.45	3.25	3.25	3.25	3.25	4.15	4.75	4.75	4.75	4.20
1940....	4.75	4.75	4.75	4.75	6.50	6.50	6.50	6.50	6.36	6.32	6.32	6.32	6.23
1941....	6.38	6.62	6.81	7.38	7.85	8.25	8.81	9.00	9.75	12.30	12.94	15.19	9.27
1942....	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
1943....	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
1944....	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
1945....	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
1946....	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
1947....	18.20	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	18.93
1948....	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
1949....	19.00	19.00	19.00	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.20	9.60
1950....	6.00	6.00	6.40	7.00	7.44	9.88	13.00	16.55	19.75	25.25	29.85	31.50	14.88
1951....	34.20	35.00	34.88	34.12	33.60	33.00	32.41	31.20	29.81	29.10	29.50	29.50	30.55
1952....	29.00	27.75	26.43	24.50	21.60	18.60	17.20	14.93	12.35	9.58	9.12	9.50	18.38
1953....	10.00	10.25	11.30	11.37	10.75	10.30	10.56	11.12	11.50	11.06	10.06	10.37	10.72
1954....	10.69	10.18	10.10	10.93	10.75	10.37	10.31	10.75	10.50	10.25	9.97	9.75	10.38
1955....	10.00	10.12	10.69	10.62	10.46	10.00	10.62	10.50	10.25	10.25	10.19	10.37	10.34
1956....	11.76	13.25	13.31	13.00	13.88	15.20	15.50	16.38	17.65	22.00			

^{1/} Prices were controlled from January 1942 to March 1947.

Source: January 1937-December 1950 compiled by Bureau of Agrl. Economics from Oil, Paint & Drug Reporter; January 1951 to date from Molasses Market News - U.S. Dept. of Agriculture.

Table 7. - Molasses, blackstrap: Price per gallon, f.o.b. tank-car, New York,
by months, January 1937-October 1956 1/

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1937....	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.19	7.00	7.00	7.00	7.18
1938....	7.00	7.00	7.00	7.00	6.70	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.68
1939....	6.50	6.50	4.50	4.50	4.50	4.50	4.50	4.50	5.25	5.75	5.75	5.75	4.95
1940....	5.75	5.75	5.75	5.75	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.58
1941....	7.00	7.00	7.25	7.88	8.20	8.50	9.25	9.50	10.25	12.80	13.44	15.19	9.69
1942....	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1943....	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1944....	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1945....	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1946....	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1947....	18.50	18.50	18.50	20.50	23.70	22.38	21.75	22.30	23.25	25.70	30.38	34.12	24.15
1948....	37.00	37.00	37.00	37.00	37.00	34.44	26.60	25.50	24.00	21.20	20.50	20.50	29.81
1949....	15.25	9.75	9.00	8.70	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.10	9.05
1950....	8.00	8.00	8.00	8.00	8.40	10.90	14.00	17.55	20.75	26.25	30.85	32.50	16.10
1951....	36.50	36.50	36.50	36.50	36.00	36.00	36.00	36.00	36.00	35.50	33.50	33.50	35.64
1952....	33.50	31.50	28.62	26.70	23.50	21.00	19.25	17.25	14.40	11.12	10.12	10.50	20.62
1953....	11.00	11.38	12.20	12.50	12.50	12.10	12.00	12.50	12.70	12.50	12.28	12.40	12.17
1954....	12.50	11.75	11.62	12.00	12.00	12.00	12.00	12.00	12.00	11.75	11.50	11.50	11.88
1955....	11.60	11.60	12.38	12.50	12.50	12.50	12.50	12.50	12.50	12.88	13.00	13.62	12.51
1956....	14.86	16.00	16.00	16.00	16.20	16.50	16.50	17.31	18.00	21.00			

1/ Prices were controlled from January 1942 to March 1947.

Source: January 1937-December 1950 compiled by Bureau of Agricultural Economics from Oil, Paint & Drug Reporter; January 1951 to date from Molasses Market News - U. S. Dept. of Agriculture

Table 8. - Price comparisons between molasses and No. 3 yellow corn
at New York, Chicago and Kansas City 1/

Year	New York			Kansas City			Chicago		
	Molasses : Difference ::			Molasses : Difference ::			Molasses : Difference ::		
	per bushel: per 6½ gal.:			per bushel: per 6½ gal.:			per bushel: per 6½ gal.:		
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1945...	134.8	120.0	+14.8	-	-	-	-	-	-
1946...	198.8	120.0	+78.8	141.1	134.4	+6.7	-	-	-
1947...	226.0	157.0	+69.0	168.6	189.0	-20.4	-	-	-
1948...	226.8	193.8	+33.0	204.1	196.0	+8.1	-	-	-
1949...	156.0	58.8	+97.2	126.3	81.9	+44.4	-	-	-
1950...	172.9	104.7	+68.2	141.0	138.4	+2.6	-	-	-
1951...	204.9	231.7	-26.8	169.2	254.2	-85.0	178.8	248.4	-69.6
1952...	203.8	134.0	+69.8	171.8	167.7	+4.1	173.9	153.0	+20.9
1953...	184.2	79.1	+105.1	156.0	118.4	+37.6	154.6	100.9	+53.7
1954...	184.7	77.2	+107.5	155.2	116.7	+38.5	155.7	99.1	+56.6
1955...	160.3	81.1	+79.2	142.2	116.1	+26.1	135.0	98.5	+36.5
1956 2/	170.3	109.5	+60.8	149.7	136.4	+13.3	144.0	130.0	+14.0

1/ Six and one-half gallons of molasses is the carbohydrate equivalent of one bushel of corn. No. 3 yellow corn is used in these comparisons.

2/ Computed through Oct. 1956. Molasses prices advanced an average of 34.5 cents (per 6½-gal.) during October at the above three points.

Table 9. - Production of ethyl alcohol, in industrial alcohol plants
from specified raw materials, 1942-56

Year	Ethyl alcohol produced from -									
	Molasses 1/		Petroleum products 2/		Grain 3/		All other materials 4/		All sources 5/	
	: Quantity : of total :		: Quantity : of total :		: Quantity : of total :		: Quantity : of total :		: Quantity : of total :	
	gallons	Percent	gallons	Percent	gallons	Percent	gallons	Percent	gallons	Percent
	1,000		1,000		1,000		1,000		1,000	
1942....	113,681	52.2	49,395	22.7	28,625	13.1	26,186	12.0	217,887	
1943....	78,444	28.9	55,646	20.5	98,851	36.4	38,281	14.2	271,222	
1944....	133,539	35.6	59,054	15.8	110,917	29.6	71,379	19.0	374,889	
1945....	61,839	22.3	61,986	22.4	129,913	46.9	23,092	8.4	276,830	
1946....	29,967	23.1	69,895	53.9	18,449	14.2	11,262	8.8	129,573	
1947....	59,249	35.7	74,133	44.7	25,813	15.6	6,786	4.0	165,981	
1948....	56,985	33.4	80,565	47.2	10,012	5.9	23,113	13.5	170,675	
1949....	75,197	44.5	75,989	45.0	5,256	3.1	12,410	7.4	168,852	
1950....	53,626	26.4	109,074	53.8	27,278	13.5	12,819	6.3	202,797	
1951....	64,862	25.7	125,433	49.6	57,165	22.6	5,298	2.1	252,758	
1952....	69,252	30.1	117,746	55.6	27,527	12.0	5,410	2.3	219,935	
1953....	77,020	32.4	147,621	62.0	3,345	1.4	10,057	4.2	238,043	
1954....	24,804	12.2	159,848	78.5	5,821	2.8	13,197	6.5	203,670	
1955....	42,944	18.0	179,662	75.0	3,416	1.4	13,467	5.6	239,489	
1956 6/	57,000	21.9	187,000	72.0	4,000	1.5	12,000	4.6	260,000	

1/ Additional amounts of alcohol were made from "molasses mixtures"; such alcohol is included in the "All other materials" column.

2/ Ethyl sulphate prior to 1950, with the addition of ethylene gas after that year.

3/ Additional amounts of alcohol were made from "grain mixtures"; such alcohol is included in the "All other materials" column.

4/ Chiefly sulphite liquors, cellulose pulp, chemical and crude alcohol mixtures, whey, pineapple juice, grain and molasses mixtures, and potatoes and potato products.

5/ Gross production of ethyl alcohol minus the quantity of unfinished products used in redistillation.

6/ Estimated.
Source: "Comparative Statistics on Ethyl Alcohol," Alcohol Tax Unit, Internal Revenue Service, converted from proof gallons of 100 proof to wine gallons of 190 proof.

Table 10. - Industrial molasses used in the production of alcohol and distilled spirits, 1941-56 1/

Year	Ethyl alcohol <u>2/</u>	Acetone butyl alcohol and some ethyl alcohol	Distilled spirits <u>3/</u>	All products
	1,000 gallons	1,000 gallons	1,000 gallons	1,000 gallons
1941...	271,043	69,175	4,192	344,410
1942...	222,741	27,699	6,749	357,189
1943...	168,800	40,211	9,860	218,871
1944...	313,665	43,680	10,577	367,922
1945...	146,914	32,784	12,436	192,134
1946...	73,170	40,413	3,497	117,080
1947...	139,248	19,183	2,803	161,234
1948...	135,563	11,132	3,082	149,777
1949...	151,061	19,977	4,276	175,314
1950...	142,859	17,685	2,435	162,979
1951...	151,653	6,570	2,595	160,818
1952...	158,777	8,013	2,428	169,218
1953...	180,226	25,613	2,557	208,396
1954...	56,554	28,910	2,319	87,783
1955...	82,453	36,146	2,709	121,308
1956 <u>4/</u> :	90,000	32,000	3,000	125,000

1/ Includes high-test molasses from 1941-44 and 1954-56.

2/ Includes "molasses mixtures" used in making ethyl alcohol.

3/ Chiefly rum and gin.

4/ Estimated.

Source: Annual Report of the Commissioner of Internal Revenue, U.S. Treasury Department, and Monthly Reports of the Alcohol Tax Unit, Internal Revenue Service.

Table 11. - Ethyl alcohol, 190 proof; Average wholesale price per gallon, tax free, tank-car lots, New York, January 1942-October 1956

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1942.....	1/ 52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
1943.....	52.0	52.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
1944.....	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
1945.....	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.5	52.7	55.5
1946.....	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	1/ 76.9	84.0
1947.....	84.0	84.0	84.0	98.0	98.0	98.0	98.0	87.0	87.0	90.6	96.0	2/ 94.9
1948.....	94.5	94.5	93.0	91.0	88.0	86.5	85.0	77.5	75.0	75.0	62.5	46.2
1949.....	38.5	24.5	21.0	21.0	21.0	21.0	29.0	29.0	29.0	29.0	29.0	29.0
1950.....	29.0	29.0	32.0	35.0	35.0	37.0	39.0	39.0	75.0	85.0	90.0	90.0
1951.....	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
1952.....	75.0	75.0	75.0	75.0	55.0	55.0	55.0	55.0	55.0	55.2	44.1	40.0
1953.....	40.0	40.0	40.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	46.0	43.0
1954.....	43.0	43.0	42.2	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
1955.....	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
1946.....	41.5	42.0	42.0	42.0	42.0	46.0	47.0	47.0	47.0	47.0	40.0	40.0

1/ Beginning and ending of price controls.

2/ In the second week of December the price quotation changed from a price "at works" to a price "Delivered east of the Mississippi River."

Source: Oil, Paint, and Drug Reporter.

Table 12. - Molasses used in the production of ethyl alcohol,
by months, January 1953-September 1956

Month	1953	1954	1955	1956
	Million gallons	Million gallons	Million gallons	Million gallons
January	27.4	1.5	3.7	7.8
February	23.9	1.4	3.5	9.4
March	20.1	4.9	3.8	9.9
April	21.5	6.4	6.5	9.1
May	19.5	7.6	7.6	9.3
June	17.7	8.2	6.8	9.0
July	16.7	5.6	6.4	5.8
August	11.1	5.4	6.8	4.9
September	6.9	4.1	8.9	3.8
October	6.0	4.0	10.5	
November	5.7	3.5	9.8	
December	3.7	3.8	8.0	

Source: Alcohol Tax Unit, Internal Revenue Service.

